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WHAT IS CLAIMED IS:

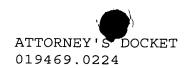
- 1. A method for providing images for an operator of a vehicle, comprising:
- 5 receiving electrical signals representing electromagnetic radiation at an image source;

generating a visual image based on the electrical signals; and

reflecting different portions of the visual image
10 with a magnifying optical element for presentation at
different viewing locations, the visual image appearing
as a virtual image;

wherein at least one dimension of the visual image is larger than the magnifying optical element can use to present an image at one of the viewing locations.

- 2. The method of Claim 1, wherein the dimension comprises the vertical.
- 3. The method of Claim 1, wherein the vertical field-of-view of the virtual image is at least one degree larger than the vertical field-of-view at the viewing location.
- 4. The method of Claim 1, wherein the magnifying optical element comprises an aspheric magnifying reflector.



- 5. The method of Claim 1, further comprising reflecting the visual image with a mirror before the visual image encounters the magnifying optical element.
- 5 6. The method of Claim 1, further comprising reflecting the visual image with the windshield for presentation at the viewing locations.
 - 7. The method of Claim 1, further comprising: receiving electromagnetic radiation; and generating the electrical signals that represent the electromagnetic radiation.
- 8. The method of Claim 1, wherein the electrical signals received at the image source represent infrared radiation from a field-of-view in front of the vehicle.
- 9. The method of Claim 1, wherein the dimension of the visual image is larger than the magnifying optical 20 element can use to present an image at a substantial portion of the viewing locations in an eye ellipse.
- 10. The method of Claim 9, wherein the portion is greater than approximately ninety-five percent of the eye 25 ellipse.

11. A method for providing images for an operator of a vehicle, comprising:

receiving electrical signals representing electromagnetic radiation at an image source;

generating a visual image based on the electrical signals; and

reflecting different portions of the visual image with a magnifying optical element for presentation at different viewing locations, the visual image appearing as a virtual image;

wherein the total field-of-view of at least one dimension of the virtual image is larger than the field-of-view that the magnifying optical element can present in that dimension at one of the viewing locations.

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- 12. The method of Claim 11, wherein the dimension comprises the vertical.
- 13. The method of Claim 12, wherein the total vertical field-of-view of the virtual image is at least one degree larger than the vertical field-of-view that the magnifying optical element can present at the viewing location.
- 25 14. The method of Claim 11, wherein the magnifying optical element comprises an aspheric magnifying reflector.

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- 15. The method of Claim 11, further comprising reflecting the visual image with the windshield for presentation at the viewing location.
- 16. The method of Claim 11, wherein the total field-of-view of at least one dimension the virtual image is larger than the field-of-view that the magnifying optical element can present at a substantial portion of the viewing locations in an eye ellipse.

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17. The method of Claim 11, wherein the portion of the eye ellipse is greater than approximately ninety-five percent of the eye ellipse.

18. A system for providing images for an operator of a vehicle, comprising:

an image source operable to receive electrical signals representing electromagnetic radiation and generate a visual image based on the electrical signals; and

a magnifying optical element operable to reflect different portions of the visual image for presentation at different viewing locations, the visual image appearing as a virtual image;

wherein at least one dimension of the visual image is larger than the magnifying optical element can use to present an image at one of the viewing locations.

- 19. The system of Claim 18, wherein the dimension comprises the vertical.
- 20. The system of Claim 18, wherein the vertical field-of-view of the virtual image is at least one degree larger than the vertical field-of-view at the viewing location.
- 21. The system of Claim 18, wherein the magnifying optical element comprises an aspheric magnifying 25 reflector.
 - 22. The system of Claim 18, further comprising a mirror positioned to reflect the visual image before it encounters the magnifying optical element.

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- 23. The system of Claim 18, further comprising the windshield of the vehicle, the windshield reflecting the visual image for presentation at the viewing locations.
- The system of Claim 18, further comprising a radiation collector operable to receive electromagnetic radiation and generate the electrical signals that represent the electromagnetic radiation, the radiation collector coupled to the image source.

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25. The system of Claim 18, wherein the electrical signals received at the image source represent infrared radiation from a field-of-view in front of the vehicle.

- 26. The system of Claim 18, wherein the dimension of the visual image is larger than the magnifying optical element can use to present an image at a substantial portion of the viewing locations in an eye ellipse.
- 27. The system of Claim 26, wherein the portion is greater than approximately ninety-five percent of the eye ellipse.

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PATENT APPLICATION

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28. A system for providing images for an operator of a vehicle, comprising:

an image source operable to receive electrical signals representing infrared radiation and generate a visual image based on the electrical signals;

a fold mirror positioned to reflect the visual image; and

an aspheric magnifying reflector positioned to reflect different portions of the visual image for presentation at different viewing locations, the visual image appearing as a virtual image;

wherein the vertical dimension of the visual image is larger than the aspheric magnifying mirror can use to present an image at a substantial portion of the viewing locations in an eye ellipse.